

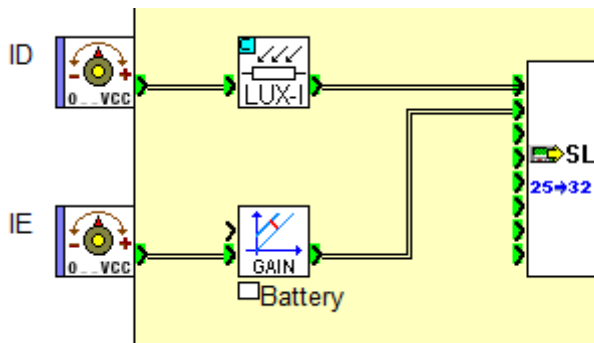
How to use a Trend Display to show M3 values in the MTPX/XX

Millenium 3 and EB MTPX/XX software

Before creating the project decide which values of the M3 are to be displayed from which SLOut address, and

- a) if 1 value is to be shown in 1 Trend Display
- b) if several values are to be shown in 1 Trend Display

Both cases have to follow different procedures



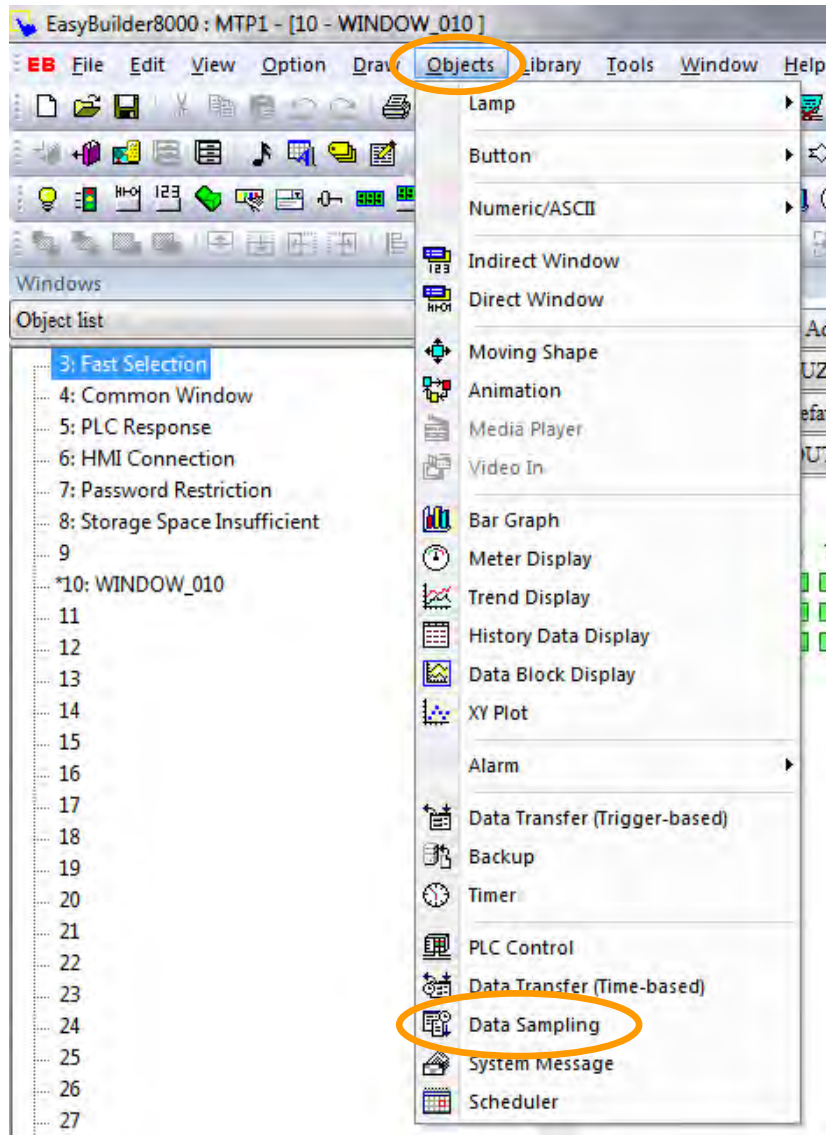
In the example a luminosity probe is connected to SLOut25. The *LUX* function gives out values from 0 to 8000 lux (values above 3000 rise exponentially and are not precise).

A battery voltage supervision is connected to SLOut26. The *GAIN* function has the parameters 2400 / 1023 which provides output values from 0 to 2400, corresponding to a battery voltage range from 0,00 to 24,00 VDC.

Part 1

How to show the development of 1 value in 1 Trend Display

1 value in 1 Trend Display

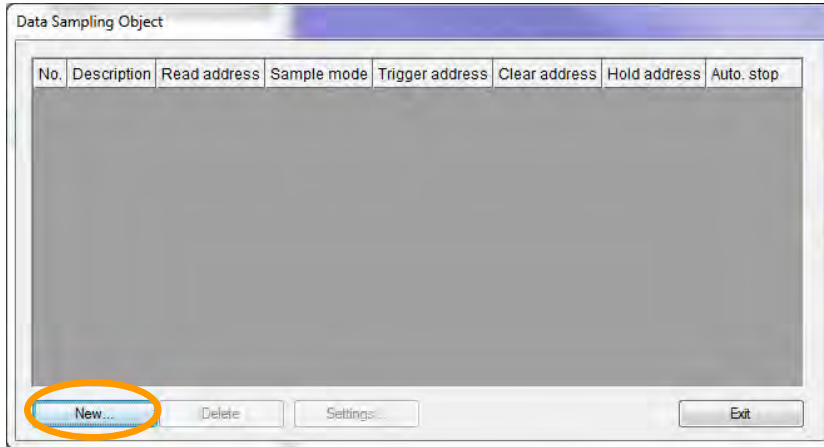


Step 1

In order to show values in a *Trend Display* it is necessary to create a *Data Sampling Object* first.

- Select a *Data Sampling* object from *Objects*

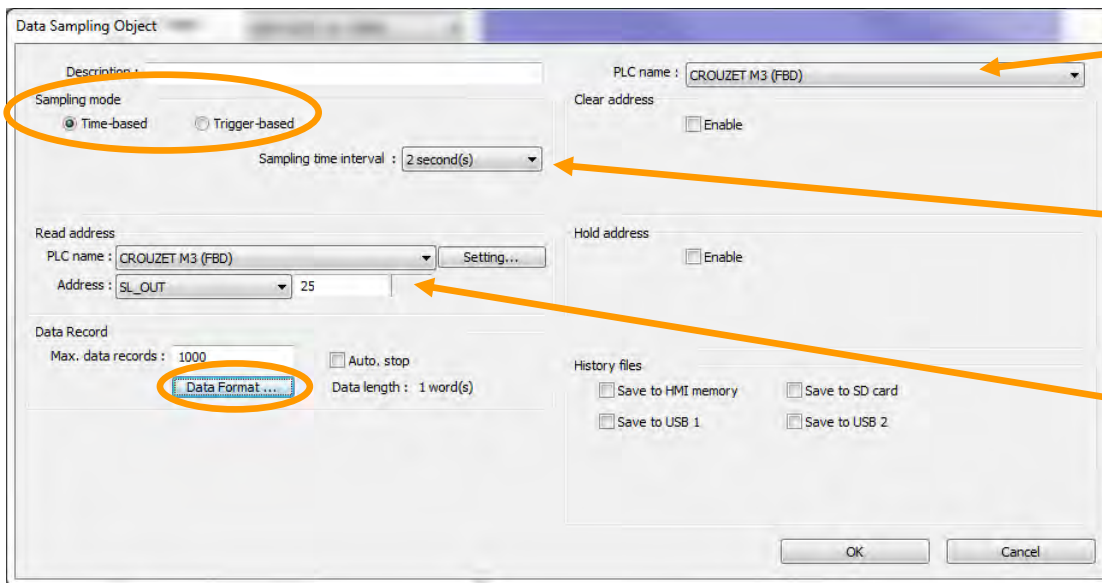
1 value in 1 Trend Display



Step 2

- Click *New*

In the *Data Sampling Object* window that opens define:



the *PLC name*

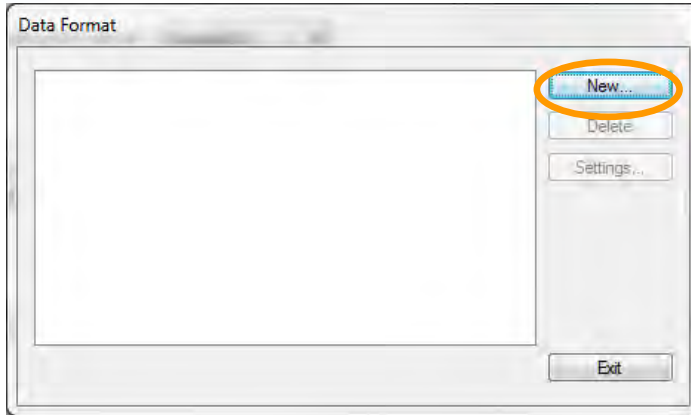
- the *Sampling mode*

the *Sampling time interval* or the *Trigger address* depending on the selected *Sampling mode*

the *Read address* of the value to be sampled

- and then click *Data Format*

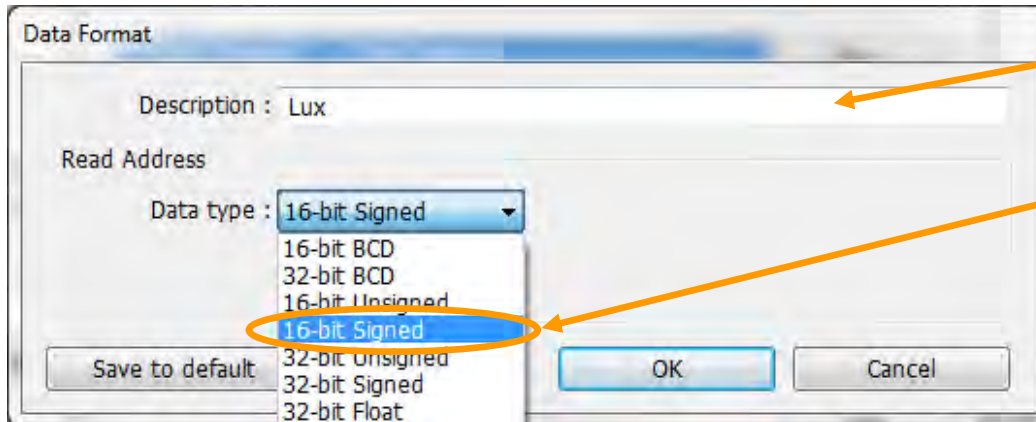
1 value in 1 Trend Display



Step 3

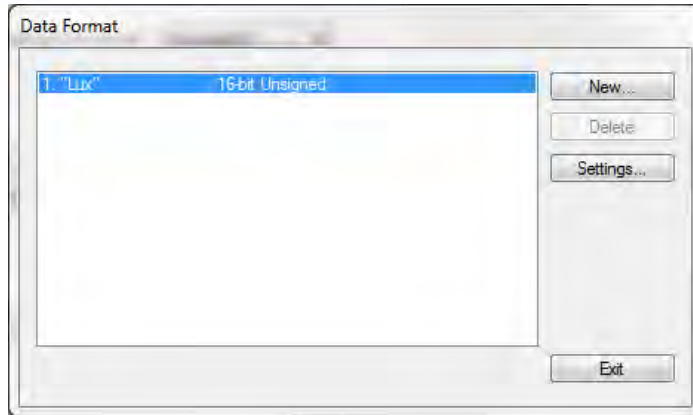
- Click *New*

In the window that opens



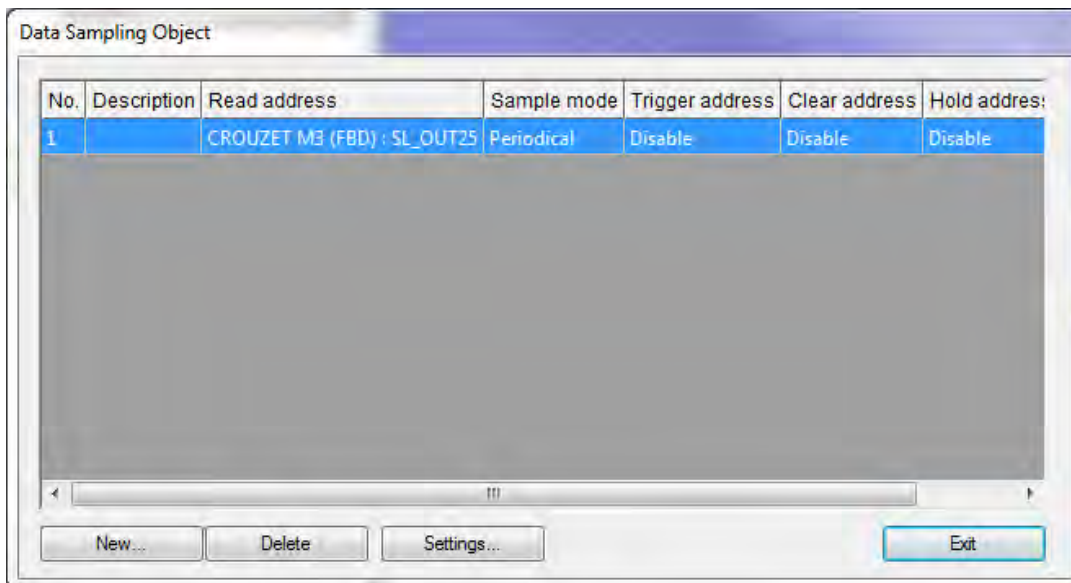
- change the *Description* i.e. to the unit of your value
- select **only** *16-bit Signed* if the values are read from the M3.
- then click OK

1 value in 1 Trend Display

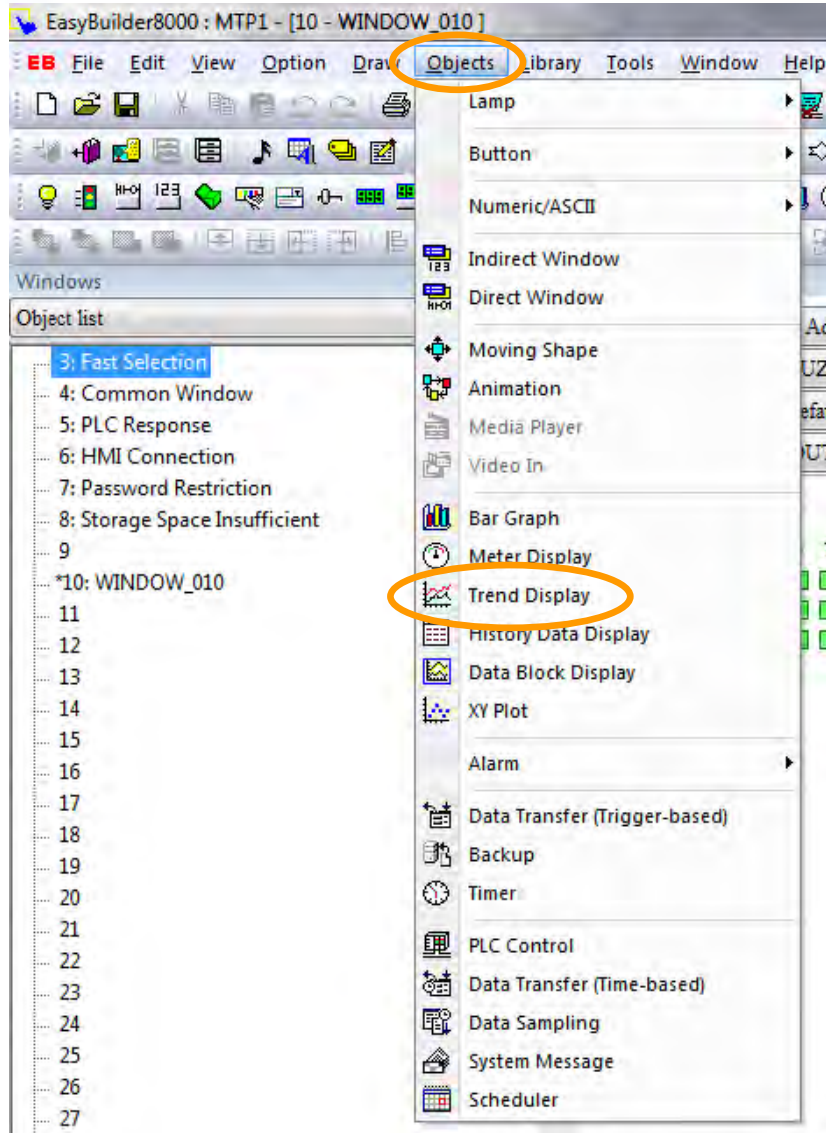


Step 4

- Click *Exit*
- then *OK* in the *Data Sampling Object* window
- then *Exit*



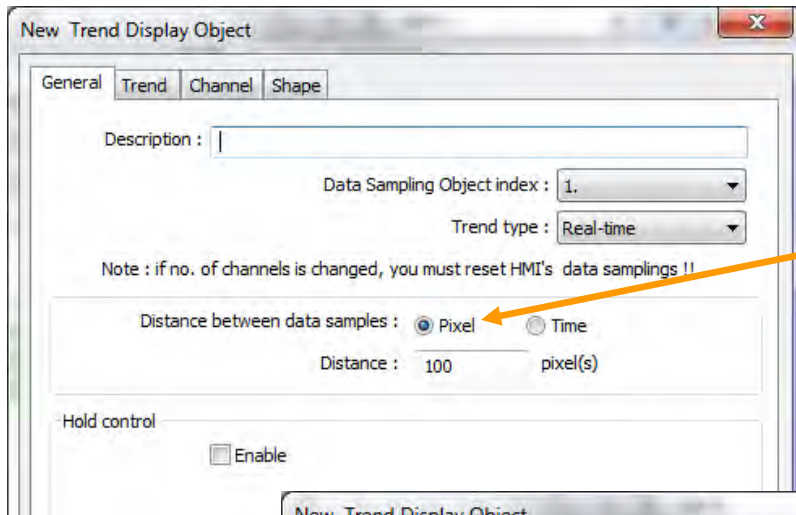
The *Data Sampling Object* is ready.



Step 5

- Select a *Trend Display* object from *Objects*

1 value in 1 Trend Display



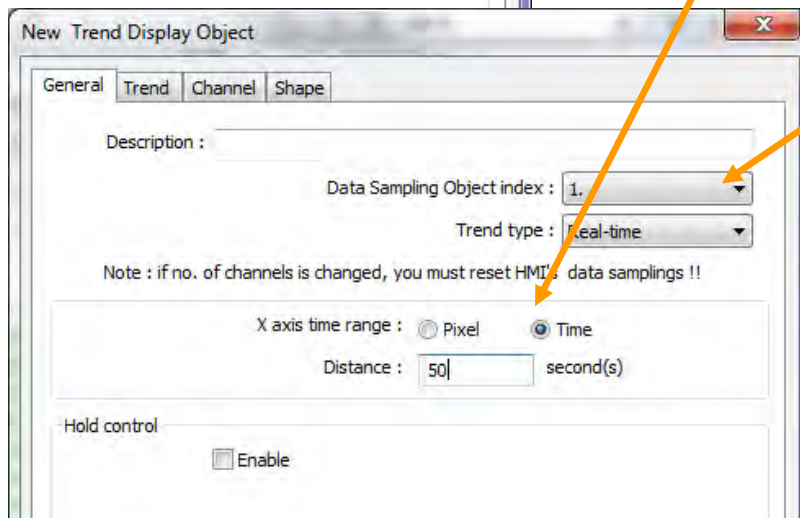
Step 6

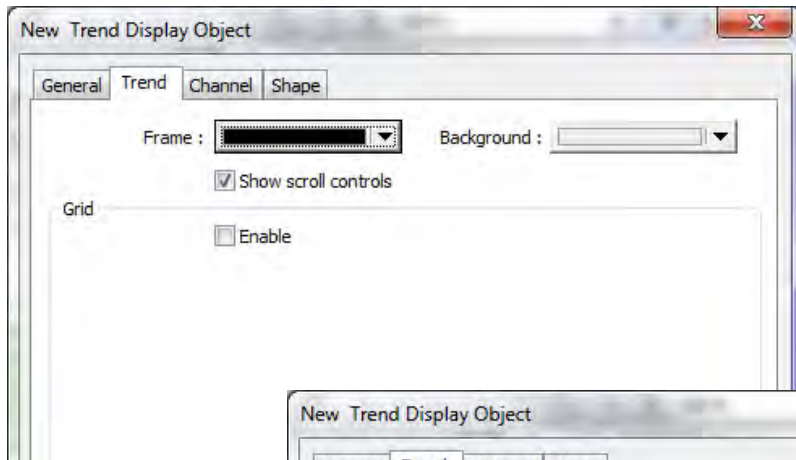
In the window that opens

Select *Pixel* or *Time* to define the X axis of the graph

- The *Trend Display Object* is automatically linked to the *Data Sampling Object*. If several *Data Sampling Objects* have been created, one has to make the link by selection.

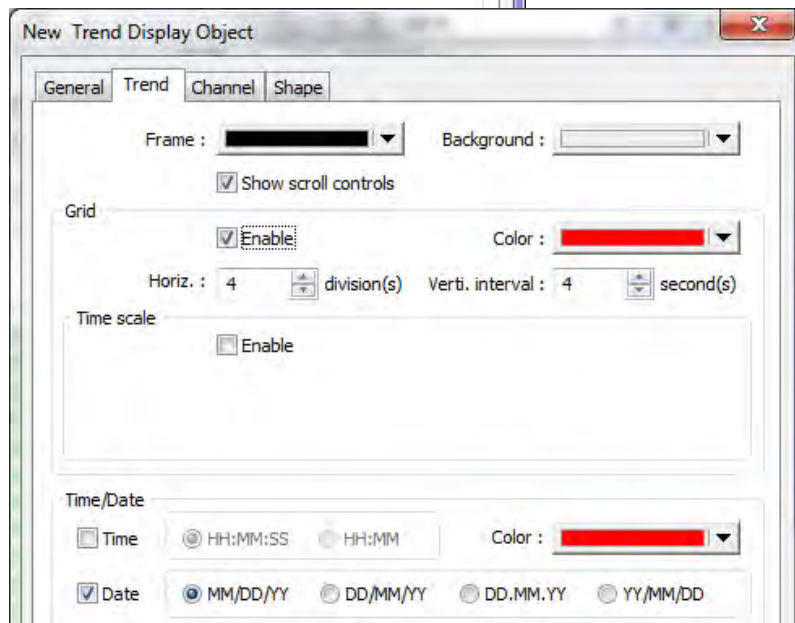
- Then open *Trend*

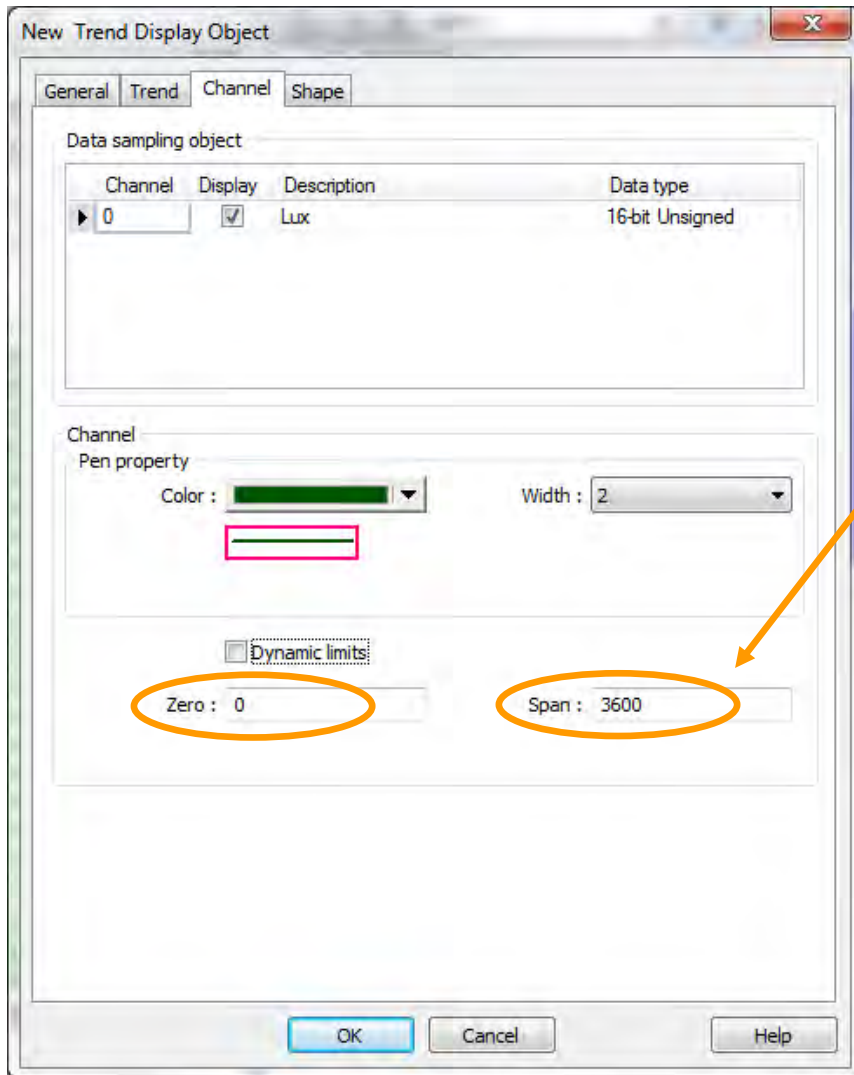




Step 7

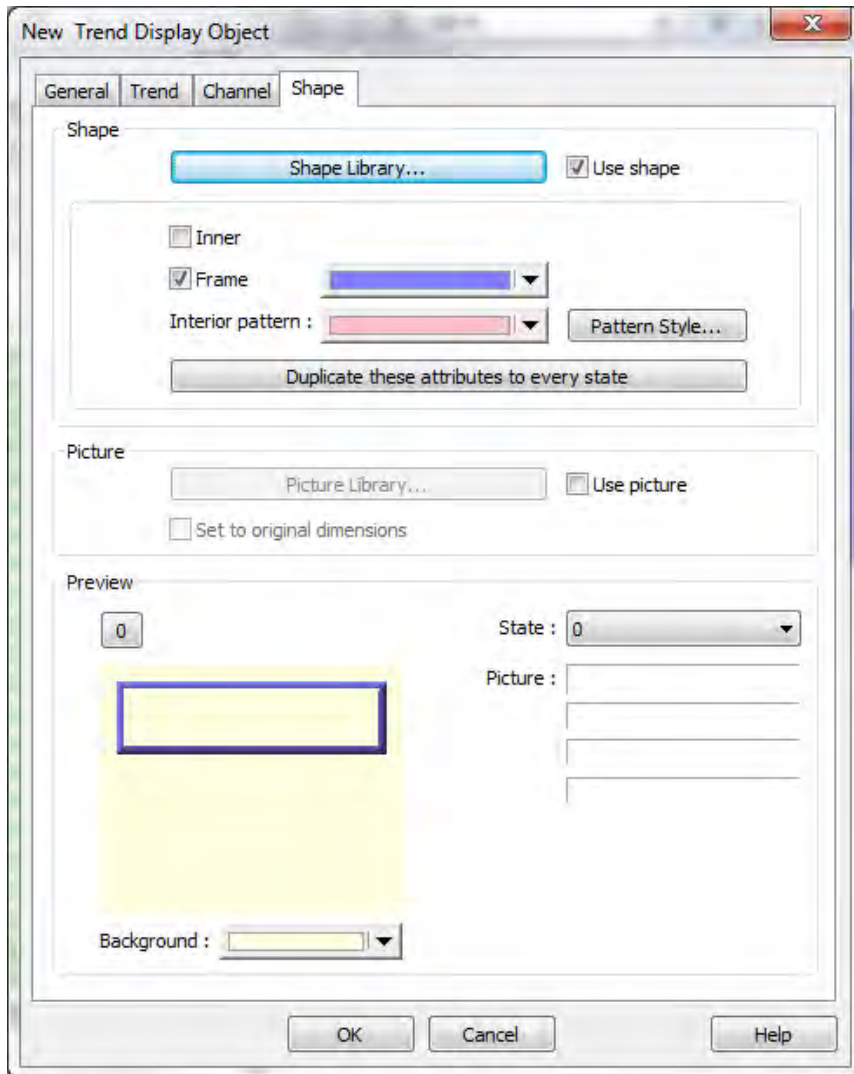
- Define the look of the graph by *Enable Grid* and setting the parameters
- Then open *Channel*





Step 8

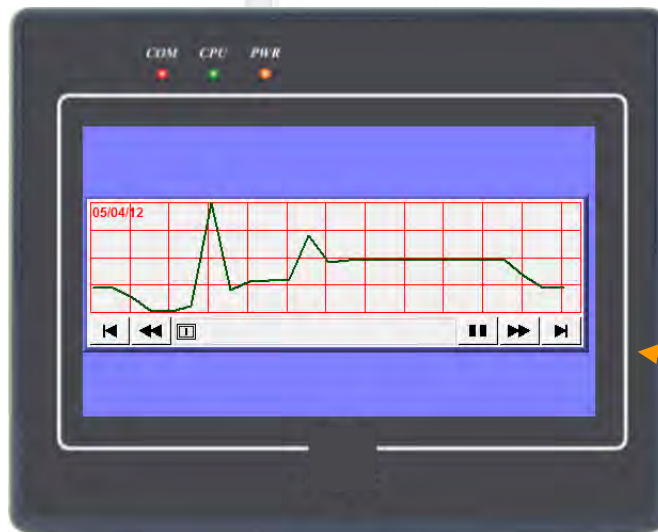
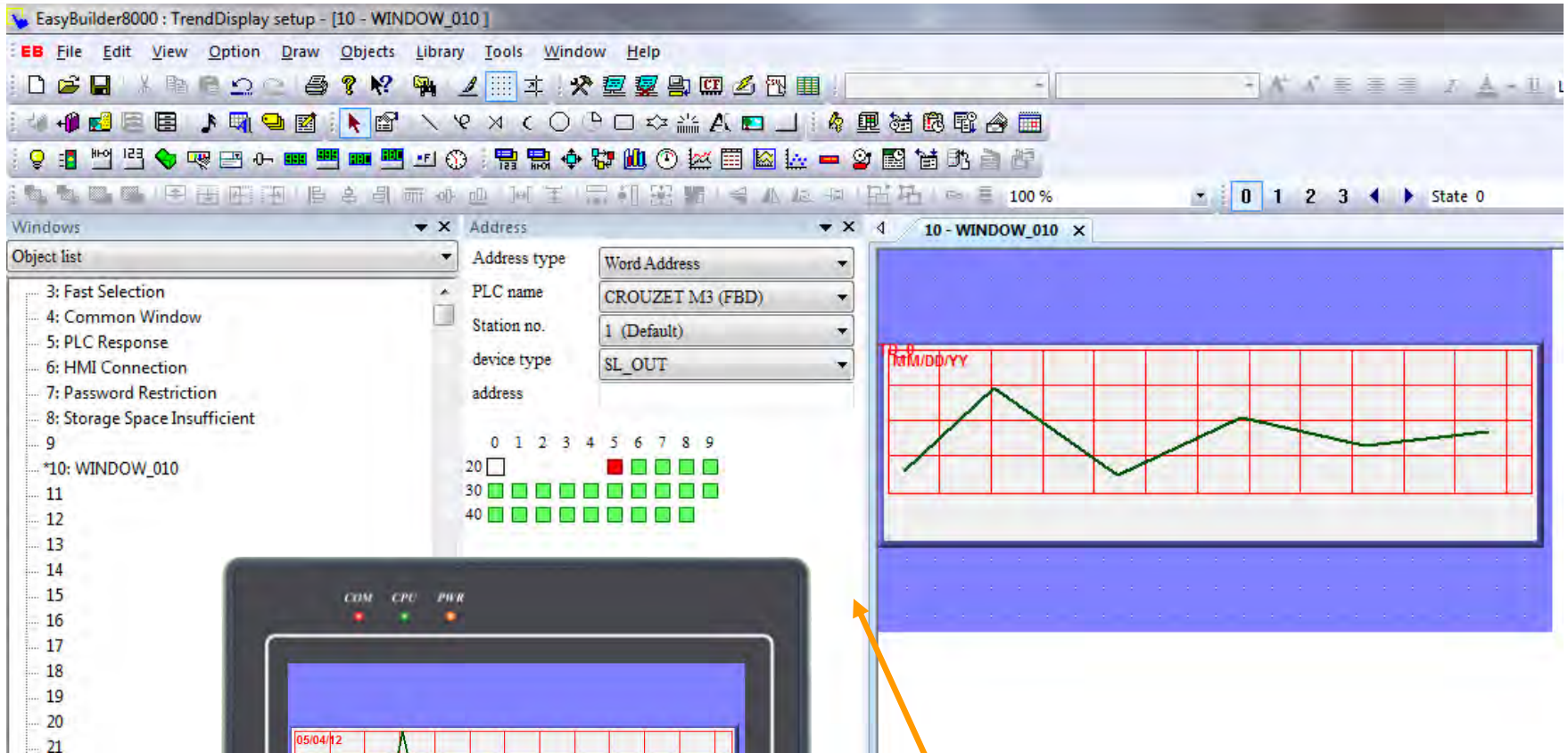
- Define the Y axis of the graph by adjusting *Zero* to the minimum value and *Span* to the maximum value of the address you are reading
- Adjust the color and thickness of the line
- Then open *Shape*



Step 9

- Adjust shape and colors to your needs
- After all the parameters have been set click *OK* and place the *Trend Display Object* into the program window. Resize it if necessary

1 value in 1 Trend Display



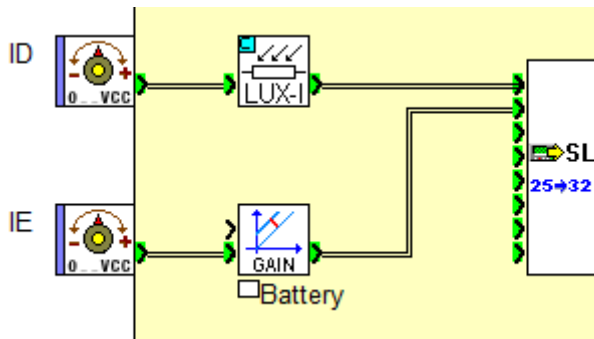
View of the program window

View in On-line Simulation

Part 2

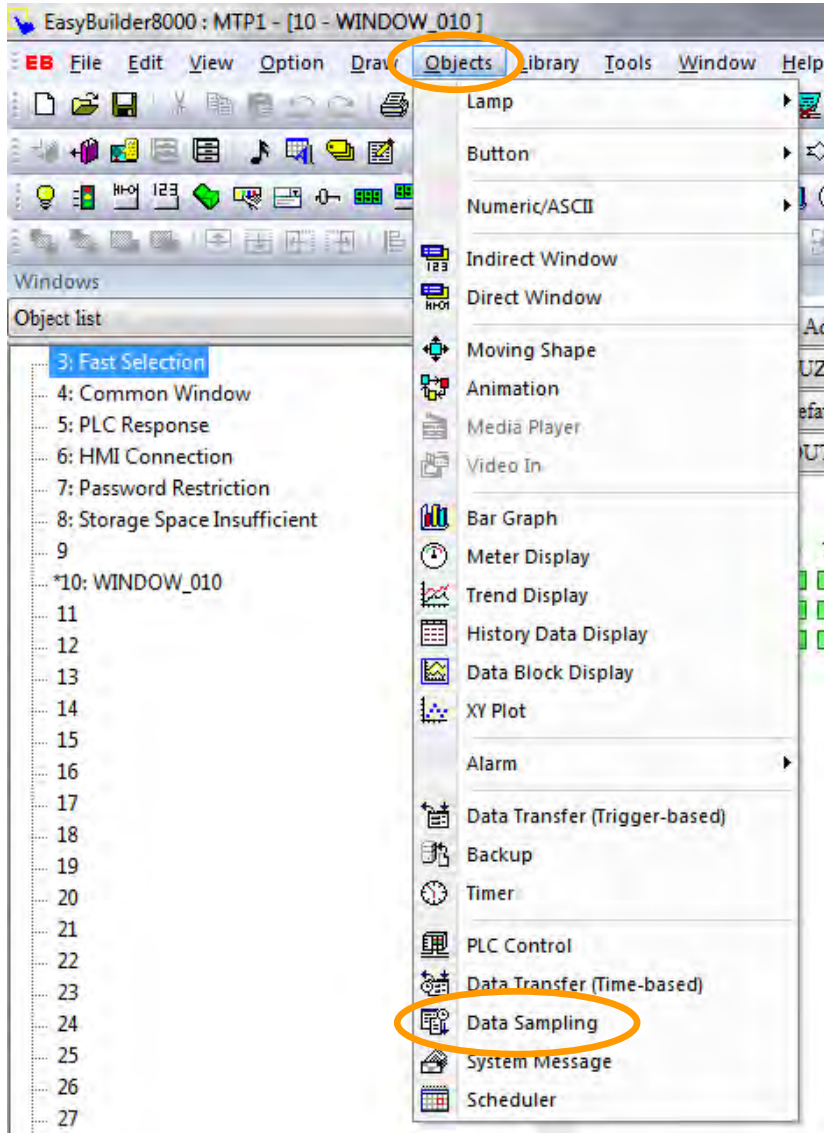
How to show the development of several values in 1 Trend Display

Before creating the project make sure that the values that are to be displayed are placed on consecutive SLOut addresses!



In the example a luminosity probe is connected to SLOut25. The *LUX* function gives out values from 0 to 8000 lux (values above 3000 rise exponentially and are not precise).

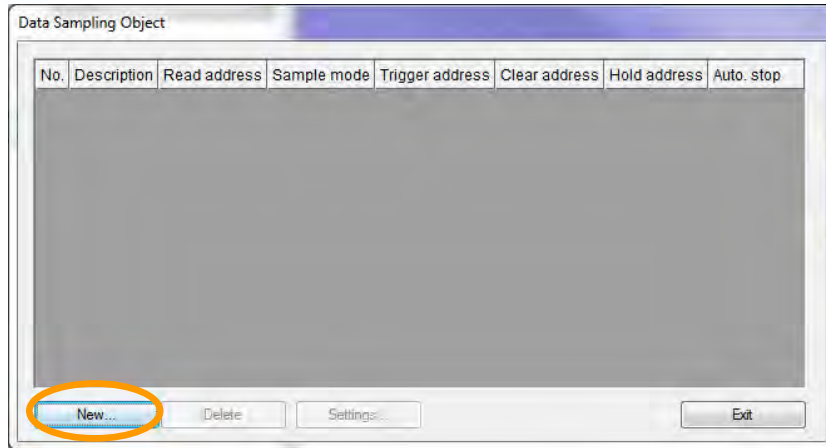
A battery voltage supervision is connected to SLOut26. The *GAIN* function has the parameters 2400 / 1023 which provides output values from 0 to 2400, corresponding to a battery voltage range from 0,00 to 24,00 VDC.



Step 1

In order to show values in a *Trend Display* it is necessary to create a *Data Sampling Object* first.

- Select a *Data Sampling* object from *Objects*

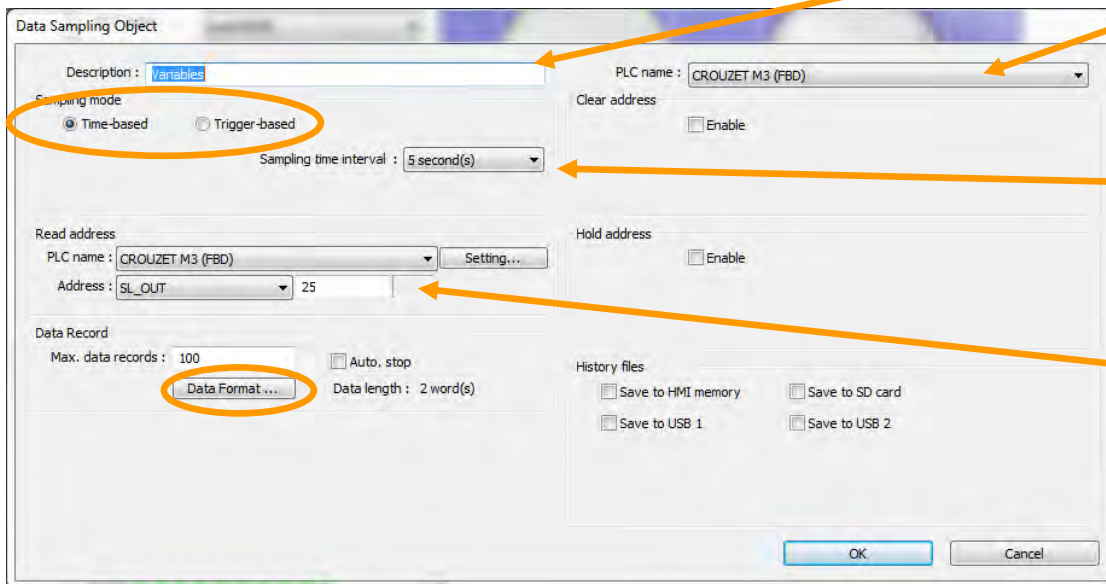


Step 2

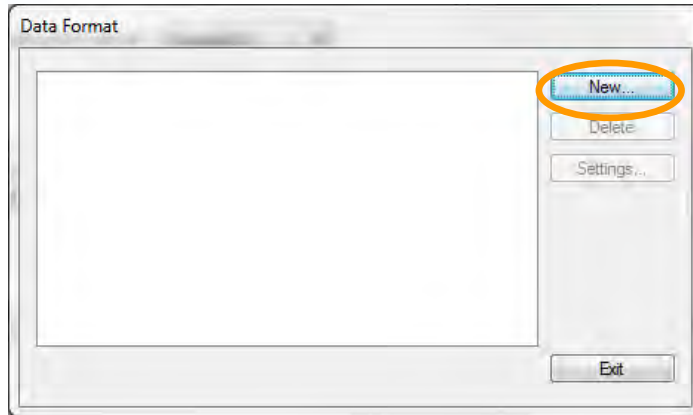
- Click *New*

In the *Data Sampling Object* window that opens define:

- the *Description*
- the *PLC name*
- the *Sampling mode*
- the *Sampling time interval* or the *Trigger address* depending on the selected *Sampling mode*
- the *Read address* of the **first** value to be sampled (the software will automatically pick up the consecutive addresses)
- and then click *Data Format*



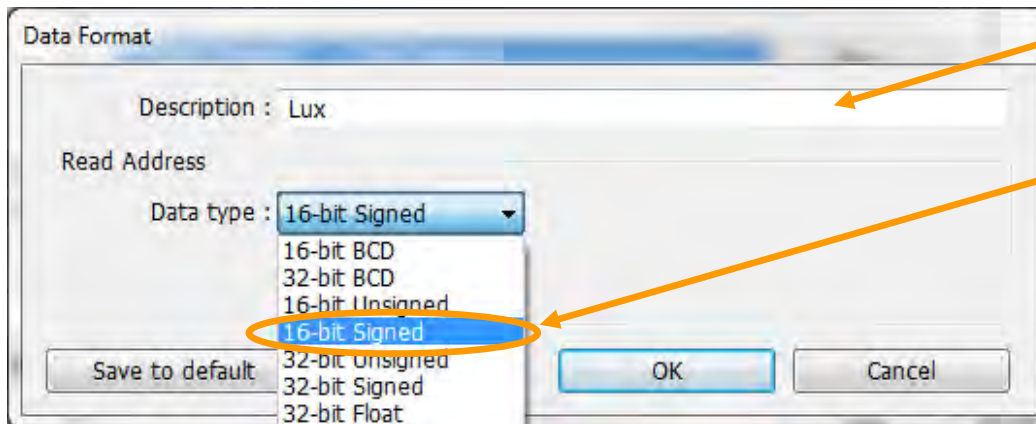
Several values in 1 Trend Display



Step 3

- Click *New*

In the window that opens

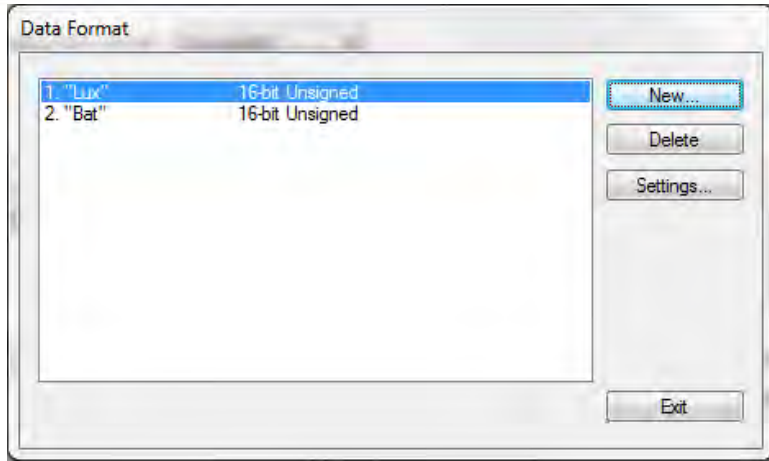


change the *Description* i.e. to the unit of your value

select **only** *16-bit Signed* if the values are read from the M3.

- Repeat the sequence by clicking *New* for each of the values that are to be displayed
- Then click OK

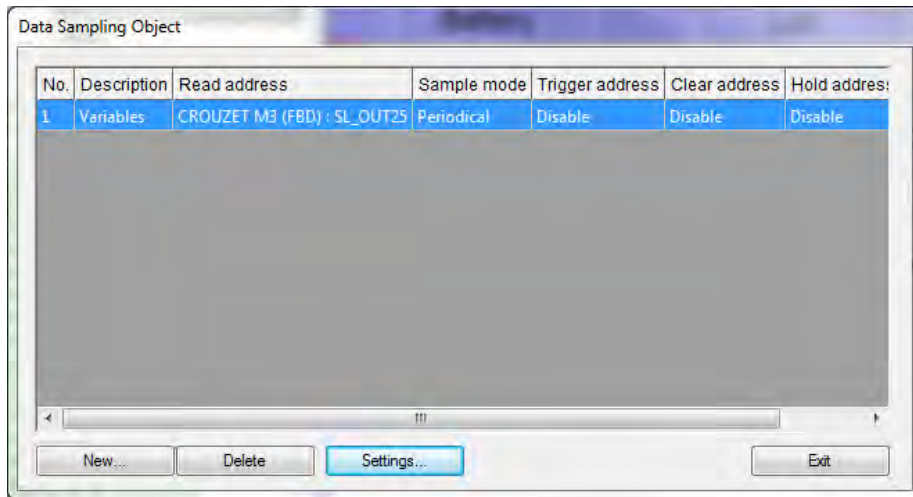
Several values in 1 Trend Display

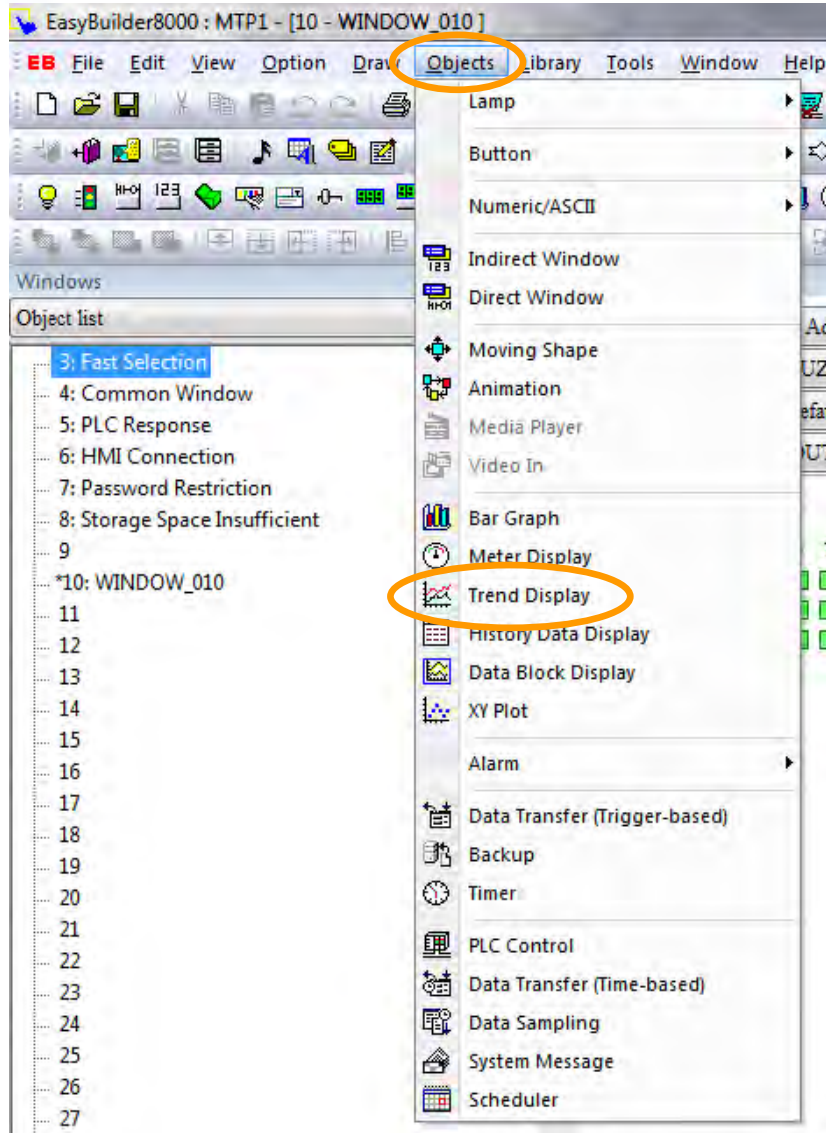


Step 4

- Click *Exit*
- Then *OK* in the *Data Sampling Object* window
- Then *Exit*

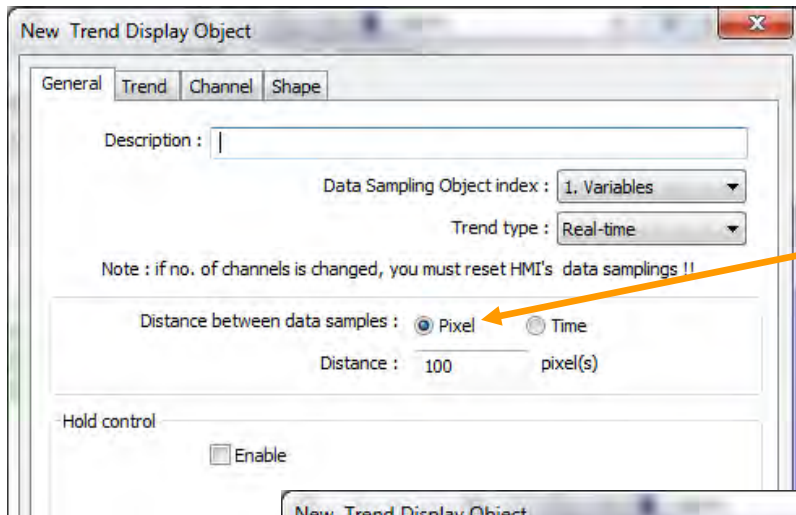
The *Data Sampling Object* for multiple variables is ready.





Step 5

- Select a *Trend Display* object from *Objects*

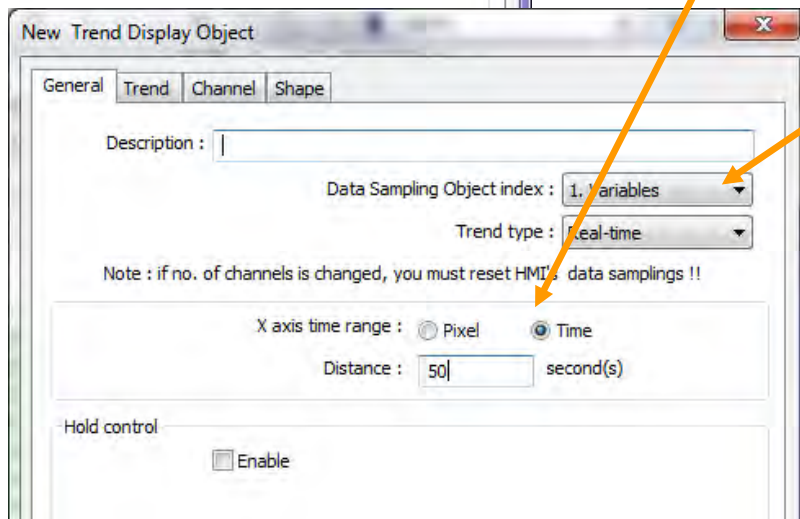


Step 6

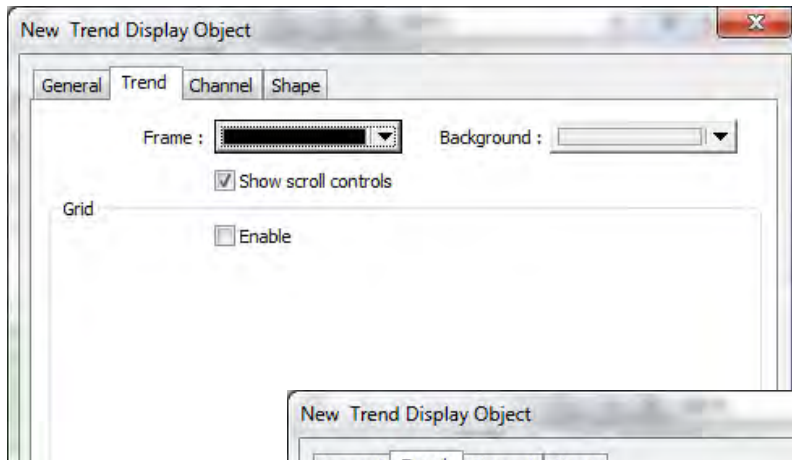
In the window that opens

select *Pixel* or *Time* to define the X axis of the graph

- The *Trend Display Object* is automatically linked to the *Data Sampling Object*. If several *Data Sampling Objects* have been created, one has to make the link by selection.

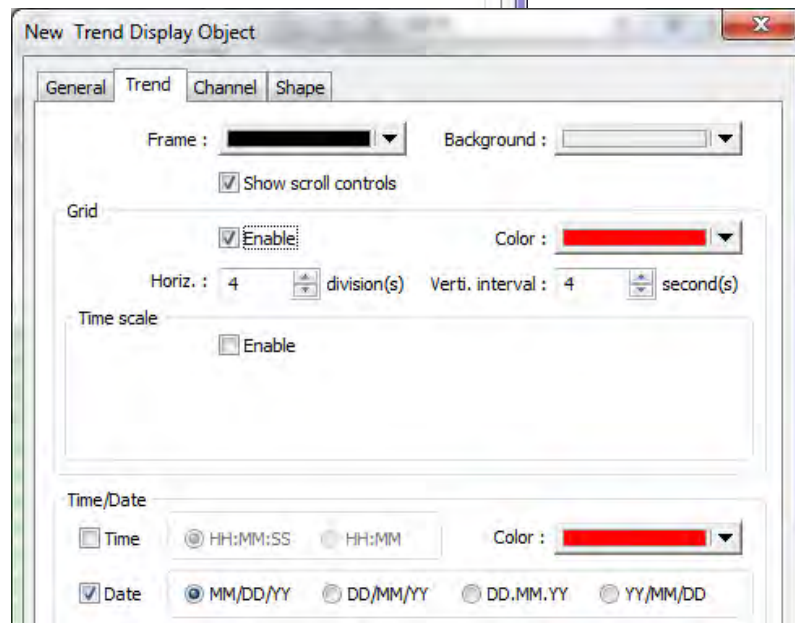


- Then open *Trend*

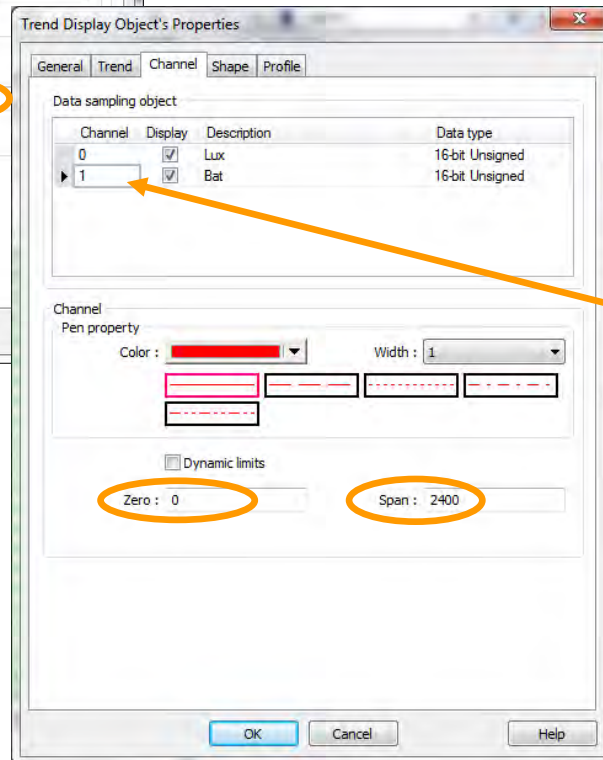
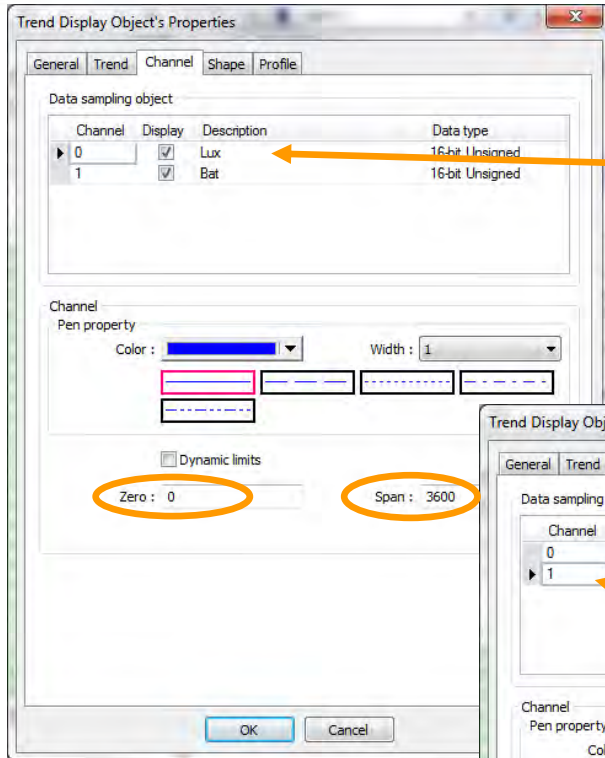


Step 7

- Define the look of the graph by *Enable Grid* and setting the parameters
- Then open *Channel*

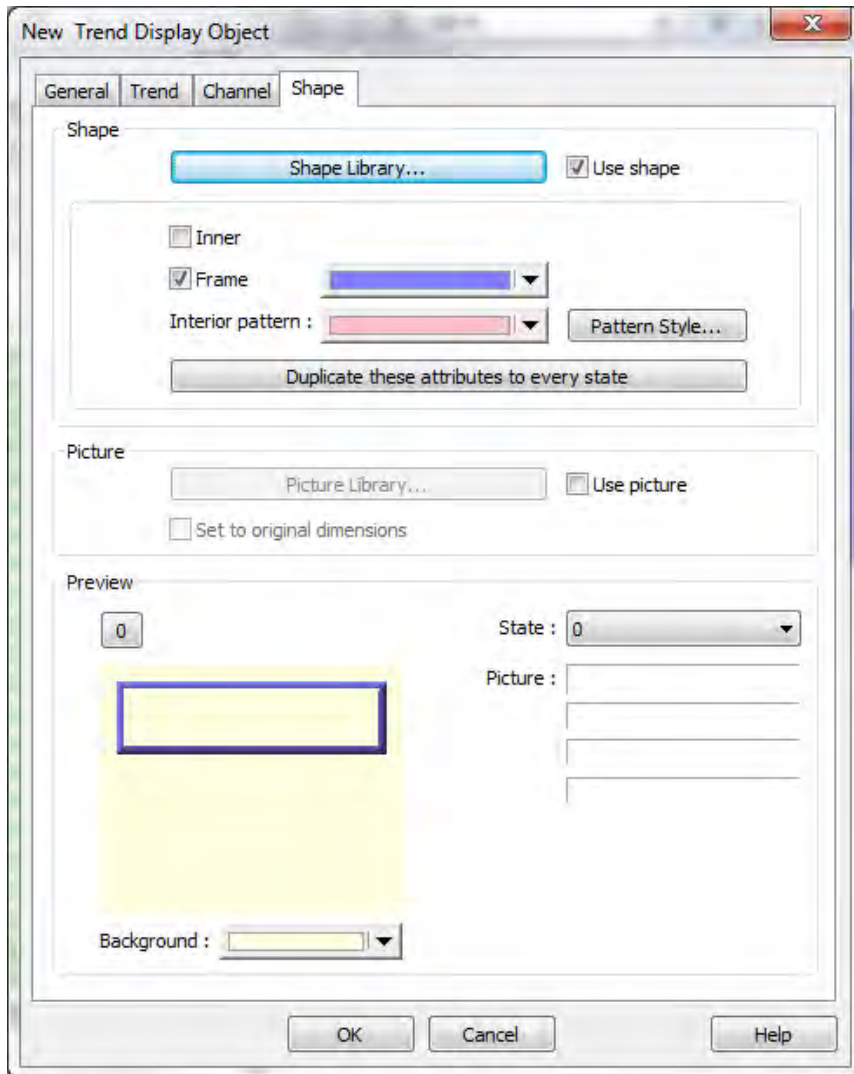


Several values in 1 Trend Display



Step 8

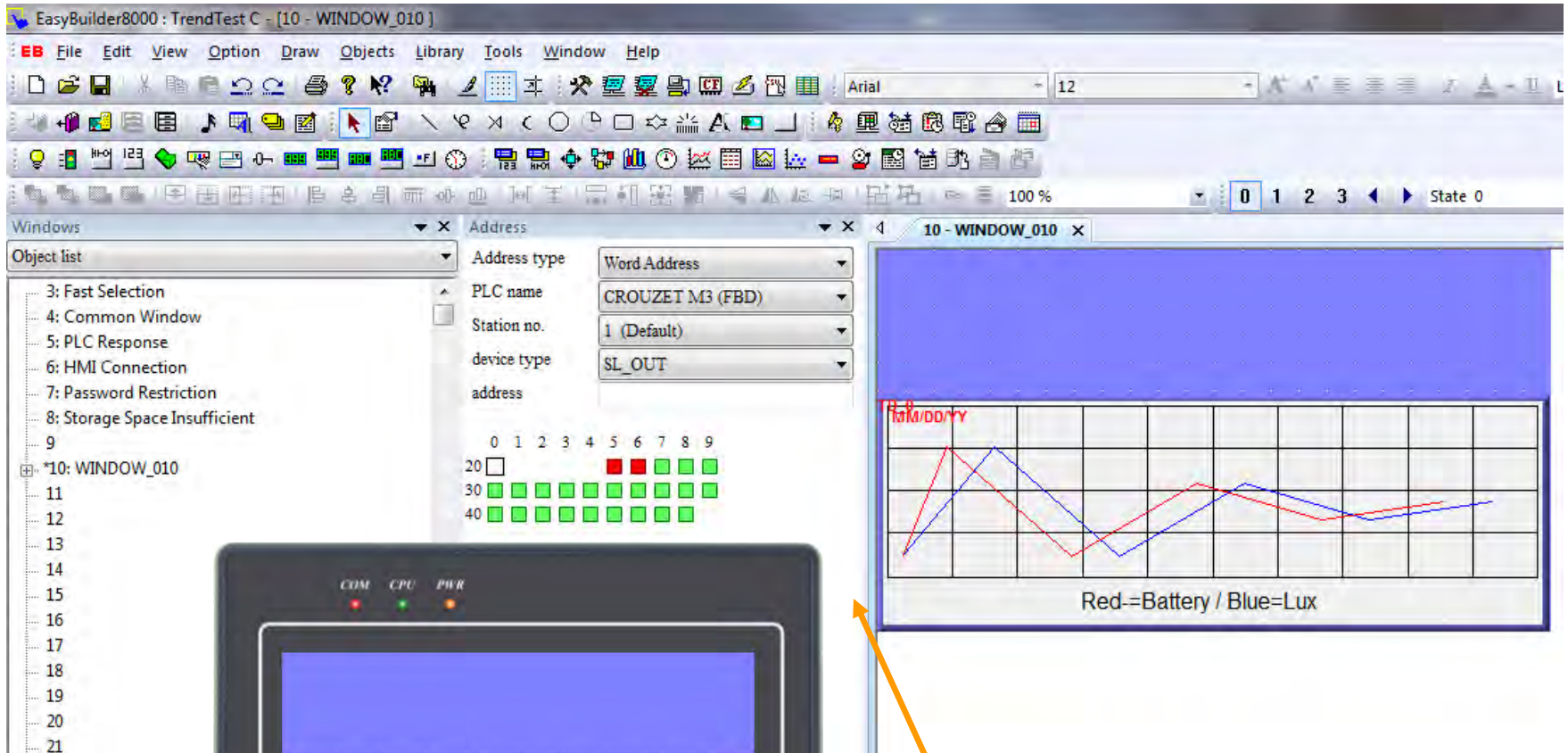
- Mark the *Channel* that is to be treated
- Define the Y axis of the graph by adjusting *Zero* to the minimum value and *Span* to the maximum value of the address that is being read
- Adjust color and thickness of the graph line
- Mark the next *Channel* and repeat the procedure
- Then open *Shape*



Step 9

- Adjust shape and colors to your needs
- After all the parameters have been set click *OK* and place the *Trend Display Object* into the program window.
- Resize it if necessary and add text

Several values in 1 Trend Display



View of the program window

View in On-line Simulation